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ABSTRACT

This study is part of a regional study in industrial South Wales on the determinants of participation and non-participation in post-compulsory education and training, with special reference to processes of change in the patterns of these determinants over time and to variations between geographical areas. The study combines contextual analysis of secondary data about education and training providers with a regional study of several generations of families in South Wales (a door-to-door survey of 1,104 representative householders), semi-structured interviews, and taped oral histories conducted in 1996-97. This study reports evidence emphasizing the importance of social background as a determinant of patterns of participation in adult education and training. By investigating the potential predictors of these patterns, the study finds that school-based qualifications are not particularly significant but are themselves predictable from an individual's background characteristics. Lifelong patterns of participation are highly predictable, although the theoretical model used here to explain them also involves individual rationality. The situation is changing, however. Over the 50 years covered by the survey data, while initial education has lengthened, later participation in formal learning has decreased in frequency, duration, and the proportion funded by employers. Thus, while extended initial education is now far less determined by socioeconomic characteristics, including gender, later education and training is slightly more determined by socioeconomic characteristics, especially gender. (Contains 40 references.) (KC)

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PATTERNS OF PARTICIPATION IN ADULT EDUCATION AND TRAINING

A Cardiff and Bristol University ESRC-funded Learning Society Project

WORKING PAPER 14

Two dimensions of time: the changing social context of lifelong learning

Stephen Gorard, Gareth Rees, and Ralph Fevre

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Abstract

Using survey data from a study of individual patterns of participation in adult education and training, this paper reports evidence emphasising the importance of social background as a determinant of these patterns. By investigating the potential predictors of these patterns of lifelong learning in a lifelong sequence, rather than all at once, this study finds that school-based qualifications are not particularly significant, but are themselves predictable from an individual's background characteristics. Lifelong patterns of participation are highly predictable, although the theoretical model used here to explain them also involves individual rationality. The situation is changing however. Over the fifty years covered by the survey data, while initial education has lengthened, later participation in formal learning has decreased in frequency, duration and the proportion funded by employers. Thus, while extended initial education is now far less determined by socio-economic characteristics, including gender, later education and training is slightly more determined by socio-economic characteristics, especially gender.

Social context

Two complementary time scales are at the heart of this analysis which investigates changes over time in the social determinants of lifetime patterns of participation in adult education and training. The analysis is based on 'age cohorts' (as in Glenn 1977), since evidence already exists to suggest that changes in local opportunities, such as those described in Gorard (1997a), Burge et al. (1998) and Chambers et al. (1998), affect the likelihood of an individual's participation (Rees et al. 1992, Antikainen et al. 1996). By using age cohorts it is possible to begin to examine the impact of these changes on individual patterns.

For the individual, there is also the consideration of their own background and experiences and how these interact with the changing opportunity structure. It has already been suggested that individual choice in matters of participation and non-participation is 'restricted' by differential access to, awareness and relevance of these objective opportunity structures (Rees et al. 1997). The term 'trajectory' is used to describe each individual pattern of lifelong participation, and to emphasise these restrictions. Trajectories have been used in other studies to describe the transition from school to work (Halsey 1980, Gambetta 1987, Banks et al. 1992, Hodkinson et al. 1996, Edwards et al. 1997), or within employment (Penn 1990). Here they are used to encapsulate *lifelong* patterns of formal learning.

Whereas changes in the opportunity structure may be based on local economic events (such as the closure of the coalmines), and national policies (such as the introduction of YTS), the determinants of an individual's take-up of such opportunities may change over their lifetime. In labour market studies the position of each individual at any stage can be chiefly explained by their position at the previous stage (Dolton et al. 1994), and their initial background characteristics (Gershuny and Marsh 1994). "*What we do now becomes what we are, and what we are in part determines what we do next*" (Gershuny and Marsh 1994, p. 69). A similar approach is adopted here in explaining individuals' participation or non-participation in learning at each stage. Lifelong learning trajectories are assumed to be based primarily on initial characteristics, and the experience of previous episodes of participation. To some extent, the continued impact of early trajectories into later life can be hypothesised from the existence

of relatively stable 'learner identities', where strong attitudes to formal education are formed as a direct result of early experience (e.g. Crombie and Harries-Jenkins 1983, Weil 1986, Furlong 1991).

Methods used in the study

The primary data for this paper are drawn from a large-scale study of patterns of participation in education and training over the last 100 years in South Wales. Readers are referred to Rees *et al.* (1997) and Fevre *et al.* (1999) for a discussion of the theoretical basis of the study, to Gorard *et al.* (1997a) and Gorard *et al.* (1997b) for a presentation of the methods used. In summary, industrial South Wales is used as the focus of the study, since it has experienced an economic 'boom, bust and limited regeneration' over a relatively short period - the lifetime of one of the participants. This makes it easier to uncover the links between economic activity and participation in learning. The study was regionally focused to allow the researchers to gain clear descriptions of the changing structures of objective opportunities for participation over 100 years, and this has been achieved primarily by analysis of taped oral histories of families dating back to 1890 in the South Wales Coalfield Archive, by interviews with key participants with long experience in local training, by secondary data analysis, and through the experiences of the researchers in previous locally-based studies. Within the focus area, a systematic stratified sample of 1,104 education and training histories have been collected from respondents aged 15 to 65, identified from the electoral register. The second wave interviewed 200 of the children of those in the first wave, while the third wave collected unstructured narratives via in-depth re-interview of 10% of those in the first two waves.

The patterns of participation of all individuals in the survey have been encapsulated in five classes of trajectories. A learning 'trajectory' is an overall lifetime pattern of participation which is predictable to a large degree from the educational and socio-economic background of the respondent (Gorard *et al.* 1998a, 1998b). The structured interviews attempted to capture all and any episodes of formal learning including one-off health and safety training, leisure reading, and evening classes as well as the more usually reported induction training, and Further and Higher Education. *Non-participants* reported no

episodes at all despite, in many cases, numerous and varied vocational changes. *Immature* trajectories describe those still in continuous full-time education, and these individuals are not used in the analysis below. *Transitional* learners reported only full-time continuous education or immediate post-compulsory work-based training so far. *Delayed* learners have a learning gap after compulsory school until at least age 21, but then reported at least one substantive episode of education or training. The *lifetime* learners reported both transitional and later episodes. Since 1945, non-participation in post-compulsory education and training has declined substantially, while delayed participation has declined slightly. Lifelong learning has increased in frequency, but the largest growth has been in transitional participation.

Logistic regression analysis with forward stepwise entry of predictor variables was used to predict these lifelong patterns of participation (as has been suggested for analysis of time-dependent variables, Allison, 1984). The dependent variable is the trajectory, and the independent variables are entered in batches in the order that they occur in the individuals life. At birth these variables include gender, year, place, and parental occupational and educational background. By the end of initial schooling these variables include details of siblings, type of schools attended, examination entry and performance, and so on. In this way, the variables entered at each step can only be used to explain the variance left unexplained by previous steps, and are selected by using the Likelihood Ratio statistic (Norusis 1994). Thanks to this novel method of analysis, the relevant variables become valuable clues to the determinants of patterns of participation in adult learning. This paper develops these regression models in two ways. First, by collapsing the five classes of trajectories into their two components of participation in immediate post-compulsory education and training, and later adult learning, it is possible to include all respondents in each analysis (see Gorard *et al.* 1998c). Thus, the number of cases, and therefore the stability of the solutions, are much greater than in previous analyses. Second and most significantly, because the number of cases is now much larger than when pairs of individual trajectories are compared, it is possible to divide the cases into age cohorts. Therefore this paper contains an investigation of the changes in the social determinants of participation in adult learning over time. In this way, some tentative conclusions can be drawn about progress towards a learning society.

In previous publications from this project using the method of logistic regression, the proportion of cases in each category of the dependent variable have been approximately equal. Thus, the percentage of cases predicted correctly was a good estimate of the predictive power of the regression, as well as its overall accuracy in classifying cases. However, with the much larger number of cases involved in the following analyses and their division into age cohorts, the proportion of cases in each category of the dependent variable are sometimes far from equal (for example in the younger of the two age cohorts over two thirds of the respondents continued with education or training after reaching the school-leaving age). In this case, a large proportion of cases may be accurately classified simply by placing all of them in the modal category. Therefore, the predictive power of each regression equation is estimated here as the proportionate difference between the observed and predicted cells in the opposite half of the table to the cell for predicting the most frequently observed category. The predictive power is calculated as the proportionate improvement relative to a base figure in which all cases are classified in the modal class. In Table I, if Category 1 is more common than Category 0 so that c+d is greater than a+b, then the predictive power of the table is |a-c|/(a+b). If Category 0 is more common, then the predictive power of the table is |b-d|/(c+d). This is equivalent to the accuracy of the model minus the modal frequency, all divided by the non-modal frequency.

Table I - Calculating the predictive power of regression equation

Observed\Predicted	Category 0	Category 1	Total
Category 0	a	b	a+b
Category 1	c	d	c+d

For convenience, in the tables of determinants any redundant information is minimised. Only variables selected as possibly relevant by a prior theoretical modelling process (see below), and retained using the likelihood ratio statistic are shown. Where these variables are categorical, the base category is not shown. Only the change in odds for each other category in comparison to the base category is shown, and the base category is described in the text. For example, the entry for gender shows only the change in odds for being male, using female as the implied base category. All models cited had a clear division between the two groups in terms of a predicted probability scattergram, and the quality of the models in terms of goodness-of-fit to the data and log-likelihood were more than adequate for analysis to continue.

Changes in social determinants over time

By dividing the respondents into two equal-sized age cohorts, it is possible to gain some indications of changes over time in the social determinants of participation[1]. Table II shows that the major change in terms of patterns of participation over time has been a large increase in transitional participation (immediate post-compulsory). There has not been an equivalent change in later-life participation. In fact, the actual frequency of later learning has dropped over time. This lack of change is not simply due to right-censoring of the trajectories of the younger cohort (who have had less time to participate), and this can be demonstrated in two ways. The *average* age of all episodes of later participation is within the age range of the younger cohort, since people tend to spend a lower proportion of their lives in education and training as they get older. The actual age of respondents within the age cohorts is not related to participation in later learning. It is also the case that episodes of later learning such as work-based training are decreasing in length, as well as frequency, over time (Gorard *et al.* 1997c).

Table II - Changes in the frequency of participation

Age	Transitional	Later
21-45	67%	45%
46-65	46%	47%

Qualifications

The decision whether to use qualifications in modelling participation over time is a difficult one, since it is not clear how far qualifications are the outcome or the determinant of formal episodes. This problem is not unique to qualifications, but is compounded by the huge rise in their frequency over time, and by their predictability at an aggregate level from socio-economic background (Gorard 1998a, 1998b). Many observers, having noted the strong relationship between prior qualifications and further participation, have suggested that qualification is a key determinant in an accumulation form of human capital theory (e.g. Roberts and Parsell 1990, Smithers and Robinson 1991). For the reasons given, this study does not find these models overly convincing (Gorard *et al.* 1999a). The changes in participation over time (in Table II) mean that age alone is a good predictor of

initial qualifications, and since the growth has been stronger for women than men, gender in conjunction with age is an even better one. When further personal and socio-economic background predictors are added to age and gender, levels of personal qualification are themselves accurately predictable (Gorard 1997b).

There is, therefore, no reference to qualifications as potential predictors in the models that follow. However, alternative models have also been created with two levels of information about qualification (as part of the interactive fitting and criticism process, Dale and Davies, 1994). In the first version, two variables were added at school-leaving age - whether a 16+ qualification was attempted, and whether all 16+ qualifications were failed. In the second variant, the level of 16+ qualification was added at school-leaving age, and this level was updated at the end of full-time initial education, and during working life. The gains in the accuracy of allocating individuals to categories of participation were negligible. At birth, and while the individual was at school, the three models were obviously identical and around 70% accurate (see below), only diverging at school-leaving age when qualification data were introduced, or not. As soon as qualifications are introduced they become key predictors for further participation, but while they increase the predictive power of models of immediate post-compulsory participation by around 1%, they have no effect on the accuracy for predictions of later participation. What happens is that qualifications simply replace, or act as a proxy for, socio-economic variables that are just as effective as predictors but which predate the qualifications in a causal chain. A similar phenomenon is observed with later levels of qualifications. They are useful predictors of adult learning just as they are at 16+, but they do not increase the predictive power of the model at all.

Several other points should be noted about this comparison between predictive models with variables about qualifications and those without. All solutions are very stable. Adding or deleting variables like the qualification at 16+ not only makes little difference to overall predictive power, it also does not significantly change the odds associated with the majority of variables. For immediate episodes, the largest change in odds is for school type and school attendance. For the majority of respondents from the tripartite era, entry to a grammar school led to 16+ qualifications and a higher probability of further education. Those going to secondary modern nearly all left school before the age of 16 and took no

qualifications. In this way (and others), school type is a good predictor of participation in post-compulsory education, *and* qualification at 16+ *and* age of leaving school. Similarly, those who reported not attending a school, of whatever type, regularly were much less likely to stay to age 16, let alone take a qualification and stay on in further education. For later episodes of participation the biggest change in odds when not using qualifications is for occupational class at the time of the episode. Those in non-manual and skilled manual jobs were much more likely to take part in any later learning episodes, regardless of their qualifications. Also more relevant in models of either stage of participation when not using qualifications were the occupational class and educational level of close family members (since there is a clear link between the qualification of parents and children for example, Gorard *et al.* 1999a).

Predictive power

The data in Table III encapsulates the two time-based analyses attempted in this study. It is possible to see how an individuals learning trajectory is shaped over their lifetime, and also to see how the determinants of these trajectories have changed over the 50 years of the study. The majority of the variance explained in the overall model (all cases) occurs with what known about an individual at birth. This is not to suggest that their patterns of participation are fixed at birth, but that within the societal constraints and opportunities available at the time, variables like year of birth and gender predict the bulk of the variance that *is* explicable (see conclusion). The predictive power rises by around six points using data collected during initial schooling, and a further four points by school-leaving age. Only for later participation is there a significant increase in predictive power of around nine points using data about occupation and adult family life. Viewed in this way, there is ample evidence for the existence of regular patterns of participation whose determinants are largely grounded in early life.

However, when the sample is divided into two roughly equal cohorts (540 cases aged 21 to 45, and 556 aged 46 to 65) this regularity changes in a remarkable way. For later participation, all three models have approximately equal power at each stage, and involve most of the same variables. The determinants of later participation have not changed all that much over time, which may be why patterns of lifelong learning have not changed as much as might be expected (Gorard *et al.* 1998c). Generally however, the model for later learning is more

powerful when the cases are separated by age. Immediate participation is much less predictable from birth for the younger group, and the bulk of the explicable variance is determined at school leaving age, whereas for the older group the bulk is explained at birth (see Figure 1). Perhaps the major reason for this change lies in the differential participation rates by gender for the two age cohorts. Participation immediately after school is now gender-neutral (in frequency if not type) and so gender is no longer a useful predictor (but see below).

Table III - Accuracy of predictions for each stage of life

All cases	Birth	Childhood	SLA	Adult	Present
Immediate	68% (0.25)	70% (0.32)	72% (0.36)	*76% (0.41)*	*78% (0.50)*
Later	62% (0.20)	65% (0.26)	68% (0.30)	72% (0.39)	*78% (0.52)*
Younger					
Immediate	70% (0.12)	72% (0.15)	79% (0.36)	*80% (0.39)*	*83% (0.48)*
Later	62% (0.22)	64% (0.27)	67% (0.31)	71% (0.42)	*78% (0.51)*
Older					
Immediate	68% (0.33)	70% (0.35)	71% (0.37)	*74% (0.43)*	*79% (0.57)*
Later	65% (0.23)	69% (0.32)	73% (0.38)	74% (0.43)	*83% (0.62)*

[the figures in italics could not be used in a recursive model involving only strictly prior events]

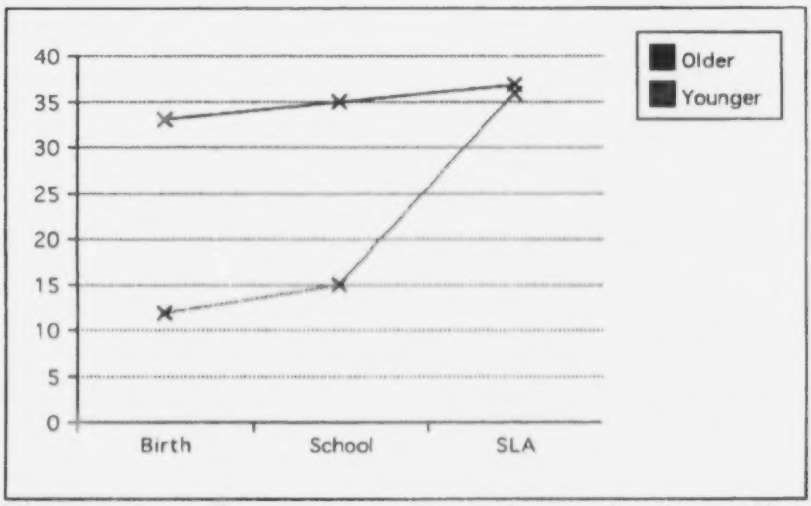

Figure 1 - Percentage of variance in immediate participation explained per step

The determinants

In general the relevance of age to patterns of participation is uncomplicated. The continuous increase in immediate post-school education and training ('immediate') means that it is much more common for the younger respondents in both age cohorts. In fact, the probability of immediate post-school education and training decreases by 0.96 for every year in the age of the respondent (Table IV). In general, age is much less relevant for predicting patterns of participation in later formal learning episodes ('later'), since these have not changed as much over the 50 years of the study. While males are more likely to participate in formal learning at any age when the sample is analysed as a whole, this overall picture conceals an interesting change over time. Whereas in the older age cohort gender was only relevant to the decision to participate in immediate episodes, with later lifelong learning being gender neutral (in quantity if not in type), in the younger cohort immediate participation is now gender balanced, and the difference lies only in later learning. It is almost as if the women who are now staying on in education and training longer and are the basis for the increase over time in immediate participation, are doing so in replacement for later participation. This could be part of the explanation why it has already been observed that the decrease in non-participant trajectories over time has not created a proportionate increase in lifelong learners (Gorard *et al.* 1998c). 'Peter' has been robbed to pay 'Paul'. The same finding also demonstrates that the link between immediate and later participation is not causal. Although it is true that those participating later in life have a higher level of general education, it is clearly not true that simply extending initial schooling will necessarily affect later patterns of participation (as implied by Tuckett, 1997 for example).

The language spoken at home makes no difference to participation patterns for the younger age group, partly because there is so little variation (see Gorard *et al.* 1997d). For the older respondents, speaking a language other than English at home is strongly related to later participation, and this may be partly due to the link between speaking Welsh and socio-economic advantage in South Wales (see Gorard *et al.* 1997d), and partly due to the relationship between participation and geographic mobility. Those born outside South Wales are almost twice as likely to participate in later learning, and three times as likely to participate in immediate learning if they are in the younger age group. The interaction between gender and place of birth is significant for later learning only. In the past, locally

born males were more likely than females and those born elsewhere to return to at least one episode after full-time initial education. Now, local males are only one third as likely as the other groups to do so. This is a dramatic change over 50 years, showing that for men at least, South Wales may indeed have had more of the characteristics of a learning society in the past (cf. Rees *et al.* 1997, Gorard *et al.* 1997c). The family background religion is also not relevant for younger respondents, but for the others the importance of a Chapel/Non-Conformist upbringing is emphasised. This might be explained in terms of the 'learning identity' associated with non-conformism and the coalfield valleys in which it was prevalent (see Gorard *et al.* 1997e, Burge *et al.* 1998, Chambers et al. 1998), and its link to 'workers education' (Lewis 1993).

Table IV - Personal characteristics (and associated changes in odds)

Predictors	All cases Immediate	All cases Later	Younger Immediate	Younger Later	Older Immediate	Older Later
Age	0.96		0.93		0.96	0.96
Male	2.15	1.69		4.35	3.03	
English spoken		0.36				0.29
Born local		0.56	0.33			0.40
Born local*male				0.37		1.88
Other Religion/none	0.60	0.56			0.51	0.39
Anglican	0.68	0.77			0.63	0.72

The characteristics of parents are key determinants of individual learning trajectories (Table V). Sometimes the mother is the better predictor of the child's participation, sometimes the father, but the pattern for both is similar. Respondents are more likely to participate at any age the older their parents were when they left full-time initial education (increasing their odds by about 1.2 for every year a parent stayed in FTE). Respondents are around twice as likely to participate at any age if their parents have any qualification, and between one and a half and twice as likely if their parents have a skilled or professional occupation. In this way, respondents match their parents learning experiences very closely (see Gorard et al. 1999a).

Table V - Family background (and associated changes in odds)

Predictors	All cases Immediate	All cases Later	Younger Immediate	Younger Later	Older Immediate	Older Later
Age father left FTE	1.18		1.22			1.27
Age mother left FTE		1.12				
Father qualified	0.49	0.57	0.51		0.46	0.44
Mother qualified					0.33	
Father Service class			1.19	1.94		
Father Intermediate			1.69	1.93		
Mother Service class	1.48	1.75		1.83		1.79
Mother Intermediate	1.63	1.64		1.46		2.03

For the older group the type of school attended at school-leaving age (SLA) was a key determinant of participation. Those from Grammar schools, for example, were three times as likely to stay on at SLA or move to a job with training as those in other types of school (Table VI). This Grammar school impact is also clear for both age cohorts in patterns of later learning. School type is not important as a determinant of immediate participation for the younger group partly because they exhibit less variation with the general disappearance of the tripartite system, and partly because of the enormous increases in immediate participation of some sort (including government-sponsored schemes for those not at school and not in work). Regular attendance at school is a good predictor of both periods of participation, and is perhaps related to the formation of a learning identity (Fevre *et al.* 1999).

Table VI - Initial education (and associated changes in odds)

Predictors	All cases Immediate	All cases Later	Younger Immediate	Younger Later	Older Immediate	Older Later
Comp. school	0.56	0.76		0.91	0.76	0.53
Grammar school	1.64	2.19		2.77	2.83	1.71
Secondary modern	0.56	0.59		0.95	0.81	0.41
Attended regularly	1.94	1.58	2.16	1.66	1.76	1.84

The variables discussed so far have explained over 70% of the variance in adult patterns of participation. All those to come explain only 5% to 10% more, and many of these variables, such as the influence of sibling or the length of residence in the research site, will have been significant throughout the life of each respondent, thus reinforcing the primary relevance of background characteristics. Current area of residence is more significant for the younger group (just as place of birth is for the older). Later lifelong participation is between a half and a third

as common in Bridgend and Blaenau Gwent as in Neath Port Talbot, and this disparity appears to be increasing since area of residence is more important for the younger cohort (Table VII). Immediate participation in the older cohort was more common in Bridgend however, and less common in the other two sites. It is hypothesised that these differences in the impact of place over time are related to changes in the relative opportunity structures for work, education and training in the three research sites (Chambers *et al.* 1998). In summary, when local economic conditions are good, participation in immediate learning episodes appears to decline. When jobs are scarce, immediate post-school participation increases since work and formal education are seen as alternatives. For later participation almost the opposite holds. Later participation is higher in times of fuller employment. Moving between areas such as South Wales, the UK and elsewhere increases the likelihood of participation in later learning, unless the first move is within South Wales, or if a parent also lives in South Wales. Generally speaking, geographic mobility is associated with greater participation.

Table VII - Regional influences (and associated changes in odds)

Predictors	All cases Immediate	All cases Later	Younger Immediate	Younger Later	Older Immediate	Older Later
Bridgend		0.60		0.35	1.67	
Blaenau		0.60		0.40	0.88	
Number of moves		1.09	0.85			1.15
First move local	0.57		0.39	0.46		
Father lives locally		0.54				
Years in S. Wales		0.99				
Live with parents		0.33		0.39		

Once all of the variables concerning adult life are added to the picture it becomes difficult to decide on the direction of their relationships. It is not clear how many of these 'predictors' could also be the outcome of participation. Perhaps the simplest to explain, in terms of strengthening an early identity as a learner or non-learner, are the educational level of the most educated sibling, and having a leisure interest requiring sustained self-study or practice (see Gorard *et al.* 1999b). Both of these characteristics are positively linked with increased likelihood of formal participation (Table VIII). Occupational class shows a very strong relationship to all forms of participation, and it must be assumed that the model is non-recursive, allowing occupation to be both a determinant and a potential outcome of learning episodes. The strength of this relationship appears

to be growing over time. In general, not having a partner, or having a partner in a professional or skilled occupation, and either few or late-born children increase the likelihood of participation.

Table VIII - Adult life (and associated changes in odds)

Predictors	All cases Immediate	All cases Later	Younger Immediate	Younger Later	Older Immediate	Older Later
Service class	3.94	1.84	6.58	3.44	3.14	2.47
Intermediate class	1.66	1.45	2.01	2.05	1.36	1.38
Leisure interest		2.01	1.75	1.68		2.53
Sibling qualified	0.63	0.53		0.54	0.60	0.52
Single			1.61			
Partner Service class						2.00
Partner Inter class						1.35
Number of children	0.81				0.82	
Age at birth	0.98				0.98	

Conclusion

The model of the social determinants of patterns of participation in adult education and training proposed in this study is a complex one. On one hand there are clear structural differences between the patterns observed here which emphasise the crucial role of an individual's socio-economic background in determining patterns of participation, and this paper seeks to explain the priority of this background over the more usually cited level of qualification. However, there are clearly individuals who do not fit the overall pattern, and to explain these there are basically two additional components: error and omitted variables. The 'error' term may be attributable to a variety of problems including recall, reporting, embellishing, recording, coding, transcription, and statistical manipulation All models are likely to contain an error component, and it would be unwise to expect any model to explain 100% of the variance in the observations on which it is based.

A second strong possibility is that the model does not include one or more significant explanatory variables, and so over-emphasises the relevance of those that are included. Although, perhaps by definition, it is difficult to identify candidates for variables that have been omitted, the model of rationality bounded by social constraints (proposed in Rees et al. 1997) does allow for choice by the

individual. In so far as choices are predictable within those bounds, the above figures may give a reasonably full account. What is left out is the formation in individuals of a relatively stable learner identity (Furlong 1996) based on their previous experience of learning, primarily at school, and affecting their view of what is appropriate participation for them in the future. In so far as qualifications and failure in examinations have a role in determining patterns of later participation perhaps their influence is also mediated via such an identity. A full consideration of such matters will have to remain the subject of a future paper.

Viewed over time, the determinants of participation have changed, but they have changed in a way that reinforces the notion that immediate and later patterns are separately determined. More people are now continuing from initial schooling, for which the leaving-age has been raised successively anyway, to further education or training. This has had the effect of making patterns of immediate participation both gender neutral and less predictable from birth. Gender is now less important than 50 years ago, while the experience of initial schooling is more so. Later patterns have not changed much however, and sufficient time has now elapsed since the first noted increases in immediate participation to suggest that this will not necessarily increase later participation. In fact, in some respects, it may do the opposite, as observed here. Later participation is now more heavily gendered than it used to be, but despite this there are indications that for males born and living in Industrial South Wales the situation is worse in absolute terms than it was in the 1950s and 1960s (see also the simultaneous apparent decline of informal learning, Gorard, 1999b). Such possibilities highlight the complexities facing policy-makers faced with creating a Learning Society in South Wales today.

Notes

1. Models with the sample divided into three and four age cohorts have also been created, but while more complex to describe and poorer in quality (fewer cases per cell), they do not add greatly to the picture of historical changes described in this paper.

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